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In the Matter of

Revision of the Commission's Rules) CC Docket No. 94-102
to ensure compatibility with)
enhanced 911 emergency calling systems) DA 99-1049

To: Chief, Wireless Telecommunications Bureau

REPLY COMMENTS OF NEXTEL COMMUNICATIONS, INC.

NEXTEL COMMUNICATIONS, INC.

Robert S. Foosaner
Vice President and
Chief Regulatory Officer

Lawrence R. Krevor
Senior Director - Government Affairs

Laura L. Holloway
Director - Government Affairs

Nextel Communications, Inc.
2001 Edmund Halley Drive
Reston, Virginia 20191
703-433-4141

Date: July 2, 1999

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SUMMARY

The Federal Communications Commission's ("Commission") enhanced 911 ("E911") Phase II rules currently require wireless carriers to locate all of its callers dialing "911" within a particular Public Safety Answering Point's ("PSAP") jurisdiction, if that PSAP has requested Phase II, has upgraded its own system to accept the Phase II information, and a mechanism is in place for the carrier to recover its Phase II costs. This requirement precludes the implementation of Automatic Location Identification ("ALI") technologies that are handset-based since such a solution would only provide ALI capabilities to those customers using Phase II capable handsets; i.e., either new handsets or, potentially, retrofitted models. As a practical, economic and logistical matter, a carrier's entire customer base, involving millions of handsets, cannot be retrofitted or converted to Phase II functionality by October 1, 2001.

At the time the Commission adopted the Phase II rules, there appeared to be no handset-based solution available to carriers. However, since that time, vendors have made significant strides in developing handset-based location technology. Therefore, to ensure that the Phase II rules do not preclude carrier flexibility to find the most effective and efficient ALI solution for their particular wireless network, network technology and customers, the Commission should modify Section 20.18(e) to free carriers to consider both network-based and handset-based ALI solutions, as well as hybrids. Such flexibility is particularly important, given the numerous unanswered technical questions surrounding the use of handset-based

and network-based technologies. Although vendors have tested these ALI solutions on analog cellular systems, there has been limited testing on the variety of digital systems in use today, and in particular, there has been no integrated handset or network-based ALI solution tested on iDEN.

As the Phase I E911 implementation process has demonstrated, there are numerous complexities to overcome prior to fulfilling the Commission's E911 mandate, e.g., obtaining state and local funding for PSAP upgrades and carrier cost recovery, establishing actual cost recovery programs to fulfill the Commission's E911 prerequisites, resolving technology and interconnection issues among the PSAP, the Local Exchange Carrier and the wireless carrier, and negotiating contracts for the provision of E911 services to the PSAP. These same issues must be resolved prior to implementing Phase II. Given the exponentially higher costs of Phase II and the remaining questions surrounding workable ALI solutions for digital wireless systems, the Commission should not expect Phase II to be implemented within the current timetables. As Phase I has demonstrated, overcoming these implementation hurdles will consume significant time and resources, thus requiring flexibility to implement effective and efficient solutions.

Additionally, as the Commission recognized in the Local Number Portability proceeding, the public interest is better served if customers have the ability make any phone call on a carrier's system -- prior to having the capability to, in this case, make Phase II compliant "911" calls. Without the coverage and capacity

necessary to permit the transmission of any 911 call, it is irrelevant whether the carrier has the capability to provide ALI capabilities. Therefore, the public interest would be best served if the Commission ensures carrier access to the most cost effective and efficient ALI solution for their particular system -- whether handset-based, network-based or a hybrid solution -- even if it requires additional time or waivers of the Phase II deadline.

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To: Chief, Wireless Telecommunications Bureau

REPLY COMMENTS OF NEXTEL COMMUNICATIONS, INC.

I. INTRODUCTION

Pursuant to the June 1, 1999 Public Notice of the Federal Communications Commission ("Commission"),^{1/} Nextel Communications, Inc. ("Nextel") respectfully submits these Reply Comments regarding the implementation of wireless Phase II Enhanced 911 ("E911") service.

In July 1996, the Commission released its Report and Order and Further Notice of Proposed Rulemaking establishing wireless E911 rules.^{2/} Therein, the Commission required that carriers be capable of providing Phase I E911 (a call-back telephone number and cell site location) by April 1, 1998, but only if (a) a Public Safety Answering Point ("PSAP") requested Phase I E911 service, (b) that PSAP had "made the investment which is necessary to allow it to receive and utilize the [Phase I] data," and (c) a cost recovery

^{1/} Public Notice, "Wireless Telecommunications Bureau Requests Targeted Comment on Wireless E911 Automatic Location Identification Requirements," DA 99-1049, CC Docket No. 94-102, released June 1, 1999 ("Notice")

^{2/} Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd 18676 (1996) ("Report and Order").

mechanism, providing the carrier reimbursement for its Phase I costs, is in place.^{3/} As of October 1, 2001, carriers would be required to provide Phase II capabilities (location of the caller within 125 meters at least 67% of the time) to any requesting PSAP if same above-listed preconditions are satisfied.^{4/}

The Phase II rules currently require a "flash-cut" implementation of Phase II caller location capability for all wireless 911 calls by October 1, 2001 -- which can only be accomplished for all existing handsets ("legacy phones") with a network-based solution.^{5/} As written, the rules require a carrier to locate all of its callers dialing "911" within a particular PSAP's jurisdiction, if that PSAP requests Phase II, has upgraded its own system to accept the Phase II information, and a mechanism is in place for the carrier to recover its Phase II costs. Implementing a handset-based location solution would provide ALI only for those customers using Phase II capable handsets; *i.e.*, either new handsets or, potentially, retrofitted models. As a practical, economic and logistical matter, a carrier's entire customer base, involving millions of handsets,

^{3/} Report and Order at para. 89; *see also* 47 C.F.R. Section 20.18(d) and (f).

^{4/} *Id.* at para. 69; 47 C.F.R. Section 20.18(e) and (f).

^{5/} Nextel's use of the term "flash-cut" is intended to distinguish between an Automatic Location Identification ("ALI") solution that can be turned on expeditiously in a market for any and all mobile units operating on therein -- to the extent all of the Phase II preconditions have been met -- and an ALI solution that would be implemented gradually in those areas where the Phase II preconditions are satisfied through handset turnover.

cannot be retrofitted or converted to Phase II functionality by October 1, 2001. This prevents wireless carriers from selecting recently-developed handset-based location technologies which may offer improved accuracy and reliability at significantly lower costs. For these reasons, and as discussed further herein, Nextel strongly supports waiver or modification of Section 20.18(e) of the Commission's Rules to provide wireless carriers maximum flexibility to implement the most effective and efficient Phase II solution for their particular wireless network, network technology, customers and the public-at-large.

On June 17, 1999, several parties submitted comments on the Notice, the majority supporting waiver or modification of Section 20.18(e) to provide greater flexibility for carriers to choose among network, handset and hybrid ALI technologies.^{6/} Among the few parties opposing such flexibility were vendors of network-based Phase II location technology solutions.^{7/} Without a waiver or revision of Section 20.18(e), wireless carriers will have no choice but to implement the network based solutions provided by these vendors -- regardless of cost, effectiveness or efficiency on their particular systems. As the comments indicate, however, most

^{6/} See, e.g., Comments of AT&T Wireless Services, Inc., BellSouth Corporation ("BellSouth"), Rural Cellular Association, Ameritech, Primeco Personal Communications, L.P. ("Primeco"), Sprint Spectrum d/b/a Sprint PCS ("Sprint PCS"), ALLTEL Communications, Inc. ("ALLTEL"), Personal Communications Industry Association, U.S. West Wireless, L.L.C. ("US West Wireless"), Airtouch Communications, Inc.

^{7/} See, e.g. Comments of KSI, Inc., U.S. Wireless Corporation, Radix Technologies, Inc. METROCOM.COM, Inc.

wireless carriers, Nextel among them, are actively evaluating the claims of location technology vendors, reviewing their product offerings, and/or arranging for testing of these competing technologies.

Given that there continue to be unanswered questions regarding ALI technology development on digital networks, it would be short-sighted to force wireless carriers into final selection decisions today based on deadlines established prior to such alternatives becoming available. The Commission's actions should be technology neutral, i.e., the rules should not artificially or arbitrarily advantage one technology over another. Thus, the public interest will be best served by modifying Section 20.18(e) to free carriers to consider both network-based and handset-based ALI solutions, as discussed below.

II. DISCUSSION

A. The Realities of Phase I E911 Implementation Should Guide the Commission's Phase II Decisions Herein

The Commission's wireless E911 rules established an implementation process that left numerous Phase I and Phase II E911 implementation issues unresolved, e.g., will there be state or local funding for the PSAP system upgrades; will states and/or localities agree to pay carriers' full costs for implementing E911; will state legislatures expeditiously adopt wireless E911 provisioning, limited liability and funding laws to facilitate implementation; will Local Exchange Carriers ("LECs") provide the facilities to route E911 calls from wireless carriers to the PSAPs; how will LECs charge carriers and/or PSAPs for routing the Phase I

and Phase II information to the PSAP; will those costs be tariffed; what type of process must be put in place to ensure that wireless carriers are actually reimbursed?

Nextel raises these issues to demonstrate the complex technical, legal and political obstacles that have arisen in its and other carriers' attempts to implement Phase I E911. The list illustrates the lessons that the wireless industry, PSAPs and other public safety organizations, LECs, state legislatures, the Commission and many others have experienced while implementing Phase I, i.e., that resolution of these matters on a state-by-state, local, or in some cases PSAP-by-PSAP basis is complex, expensive, often highly politicized and requires significant time and resources. No one contemplated, for example, the specific technical complexities regarding PSAP-LEC-carrier interconnection that would have to be resolved to provide Phase I. And, certainly no one fully appreciated the time frame needed to individually negotiate thousands of contracts between PSAPs and wireless carriers -- particularly in the absence of federal or uniform state legislation that limits wireless carrier liability for 911 calls comparable to the liability protection states provide wireline carriers for transmitting wireline 911 calls.^{8/}

^{8/} Even when cost recovery authority is enacted, Nextel's experience with Phase I to date demonstrates that executing contracts with thousands of individual PSAPs requires working through a variety of legal and technical issues, including divergent views on how the service should be provided and what it really costs.

Phase I implementation also has revealed a significant disconnect in the Commission's rules: carriers are expected to invest millions of dollars on E911 equipment and network upgrades before they have any assurance that (a) a single PSAP will be ready, willing and able to take E911 calls, and (b) before any actual cost recovery is guaranteed. Although carriers have nonetheless implemented the necessary system upgrades to provide Phase I prior to having any assurance of actual cost recovery, the obstacles to which are described above, Phase II's exponentially higher costs require that the Commission fully resolve the cost issue prior to any carrier being required to make a multi-million dollar investment in ALI technology and system upgrades. At a minimum, should the Commission choose not to resolve these significant issues, thereby requiring carrier investment perhaps years in advance of obtaining even marginal cost reimbursement, it should provide carriers the flexibility to implement the most cost effective Phase II solution for their system. Forcing carriers into a costly technological solution simply to meet a deadline -- established without the benefit of today's experiences -- is arbitrary and not in the public interest.

Accordingly, the Commission's inquiry herein must be informed by the realities of Phase I E911, which has not been implemented according to the Commission's initial expectations, having been completed in less than ten percent of the country. Because Phase II implementation will involve many of the same issues, e.g., appropriate cost recovery, technological compatibility, liability,

LEC technology and funding -- on an exponentially more complex scale -- the Commission should be guided by the Phase I implementation process in establishing reasonable and informed expectations for Phase II implementation. Phase II location technology -- whether network or handset-based -- will require investments orders of magnitude larger than the investment in Phase I, meaning that PSAPs, local governments and state legislatures will have to earmark significantly more tax dollars for both PSAP upgrades and infrastructure, and carrier cost recovery, thereby increasing the politicization of the issue.

B. Technological Advances Have Broadened the Possibilities for Phase II Location Solutions

The public interest is best served by considering all of the information available to the Commission, rather than relying on dates that were established three years ago based largely on speculation and technological projections. Nextel agrees with the Commission's conclusion at the time that "setting a firm date [would] encourage entrepreneurial efforts and investment. . ."^{9/} In fact, the Commission's goal has been achieved as "entrepreneurial efforts" have developed additional technological alternatives, such as handset-based solutions, which may provide Phase II capabilities at significantly lower costs. Accordingly, the Commission should reexamine its rules and amend them to provide carriers the flexibility to evaluate and consider all available Phase II technological alternatives.

^{9/} Memorandum Opinion and Order, 12 FCC Rcd 22665 (1997) at para. 120.

The Commission should not allow location technology vendors to drive the time frames for Phase II implementation. Nextel does not dispute that these vendors have made significant strides in location technology since 1996, but Nextel expressly disputes unconditional claims that their solutions can be implemented earlier than October 1, 2001. For example, there has not been a single test of any integrated handset or network-based solution on an iDEN system; to a large extent, most of the testing has occurred on analog cellular systems, which are significantly different than the variety of digital systems in existence today. The mere fact that a location technology operates on an analog cellular system is not evidence that it will work -- without significant modification -- on the myriad digital networks operating today or that it will work the same way in different RF environments. In short, competition among ALI technology vendors should not drive Phase II deadlines. Rather, the Commission should continue to use deadlines to promote the overall implementation process while permitting carriers maximum technological flexibility.

The potential for a cost-effective handset-based location technology solution has led Nextel -- among other carriers -- to seriously consider both types of technologies for Phase II E911. Nextel is reviewing, analyzing and investigating various solutions provided by different ALI vendors. Nextel, however, is dependent upon a sole supplier of its iDEN handsets and network equipment -- Motorola. To date, Motorola has not provided Nextel a Phase II solution for the iDEN system nor has Motorola given Nextel any

assurances that the Commission's accuracy and location standards could be met prior to October 1, 2001. Nextel is scheduled to test a number of location technology solutions later this year, but at this time -- despite vendor comments that may appear to be contrary -- no integrated ALI solution has been demonstrated to work on Nextel's iDEN network. Nextel desires maximum flexibility to make the most economic, reliable and effective choices. The public interest is not served by forcing carriers into costly, inefficient Phase II decisions.

As the Commission concluded in the Local Number Portability ("LNP") proceeding, shifting wireless carriers' resources away from system buildout to fulfill public policy objectives is not always in the public interest. Wireless carriers currently are investing billions of dollars and thousands of man-hours to build out their networks to fulfill the needs and demands of the continually expanding, increasingly competitive wireless telecommunications marketplace. Consumers are demanding improved coverage and service quality, as well as innovative products and service options, at lower and lower prices. Carriers must invest significant resources to meet these consumer demands and remain competitive in the marketplace.^{10/} The Commission concluded that implementation of LNP should be postponed until carriers have an opportunity to further build out their systems since, without a system on which to make telephone calls, consumers would have no need to port a telephone number.

^{10/} Fourth Report, FCC 99-136, released June 24, 1999.

The same is true for Phase II E911 implementation, and in fact, it is more important since public safety concerns are at stake. Sufficient coverage and capacity are a necessary prerequisite to a customer's ability to make any wireless phone call -- "911" or otherwise. Thus, if carriers are forced to shift resources into location technologies (which may have a significant impact on system capacity) rather than system buildout, the presence of location technologies may be irrelevant to a customer in need of emergency services in an area where the carrier has no coverage or insufficient capacity to handle the call volume. Carriers have invested significant time and resources in building out their networks, and at the same time, have made the investments necessary to provide basic 911 services to the public, and to upgrade their networks to ensure Phase I E911 is available where the Commission's pre-conditions are satisfied. Given the shift in resources that is required to provide Phase II location capabilities, the public interest is best served by providing carriers flexibility to implement the most efficient and cost effective solution, even if it requires additional time or waivers of the Phase II timeline.

C. The Commission Can Facilitate Effective and Efficient Phase II Services Through A Rule Waiver or Modification

In light of the changed facts and circumstances since the Commission first adopted Phase II E911 rules, Nextel respectfully requests that it reconsider its October 1, 2001 flash-cut implementation requirement to permit carriers the flexibility to examine handset-based, network-based or a combination of both ALI

technologies for Phase II implementation. The Commission can accomplish this through a rule modification that permits gradual Phase II implementation. Additionally, the Commission could permit waivers on a case-by-case basis, affirmatively endorsing carriers' consideration and evaluation of handset-based solutions, or it could -- as proposed in the Notice -- establish specific standards for reviewing waiver requests. However, any general standards the Commission considers for waiver of the Phase II implementation requirement should not contemplate earlier implementation of handset-based solutions or more accurate location standards. Given the nascent state of the technological solutions today, it is unrealistic to expect carriers to fulfill any such standards.

III. CONCLUSION

For the reasons discussed herein, the Commission should modify or waive Section 20.18(e) of its rules to permit wireless carriers to consider implementation of handset-based location technologies.

Respectfully submitted,



Robert S. Foosaner
Vice President and
Chief Regulatory Officer

Lawrence R. Krevor
Senior Director - Government Affairs

Laura L. Holloway
Director - Government Affairs

Nextel Communications, Inc.
2001 Edmund Halley Drive
Reston, Virginia 20191
703-433-4141

Date: July 2, 1999

CERTIFICATE OF SERVICE

I, Rochelle L. Pearson, hereby certify that on this 2nd day of July 1999, caused a copy of the attached Reply Comments of Nextel Communications, Inc. to be served by hand delivery to the following:

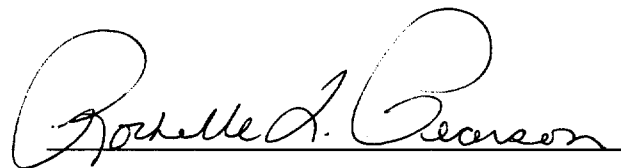
Tom Sugrue, Chief
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, SW
Room 3-C207
Washington, DC 20554

Dale Hatfield, Chief
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, SW
Room 7-C155
Washington, DC 20554

Daniel Grosh, Senior Attorney
Policy Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, SW
Room 3-A221
Washington, DC 20554

Nancy Boocker, Deputy Chief
Policy Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, SW
Room 3-C150
Washington, DC 20554

Mindy Littell, Attorney
Policy Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, SW
Room 3-B103
Washington, DC 20554

A handwritten signature in black ink, reading "Rochelle L. Pearson". The signature is written in a cursive style with a horizontal line underneath the name.

Rochelle L. Pearson